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Gentlemen:

Pursuant to 10CFR50.59(b) the following items are submitted for the Kansas State University TRIGA Mark II Nuclear Reactor Facility for the period 1 Oct 1999 through 30 Sep 2000.

A. Changes to the facility

Systems and Equipment:

The KSU gamma spectroscopy systems used to support waste assay for the reactor facilities have been upgraded. The upgrade was a one-to-one functional replacement of two instruments, one germanium detector and the addition of a portable sodium iodide based spectrum analyzer.

Personnel:

During this reporting period, three persons successfully completed USNRC license examination for Reactor Operator.

In April 2000, a full time Reactor Manager was hired. In June and July 2000, two Senior Reactor Operators left.

In October 2000, three non-licensed staff (in training for license) were hired. Four persons (3 students and the Reactor Manager) have been scheduled for license examination in January 2001.

At the end of this reporting period, KSU licensed staff includes one (1) Senior Reactor Operator and 3 (three) Reactor Operators.

B. Changes in Procedures

In Progress:

The following changes were submitted to RSC in October 2000, are currently in review, and will be reported following approval:

Administrative Plan – Clarify organizational structure, editorial changes, and deletion of requirement for reporting all KSU fissile material changes to the Reactor Manager and Reactor Safeguards Committee

JE47

Facility Operations Manual -- Clarify role of vendor manuals in supporting Facility Operations Manual (current revision identifies as part of the manual), provide for issuing Management Directives

Approved During the Reporting Period:

1. Procedure 25, Removal of Residual RSR Oil (28 Feb 2000) -- Procedure revision approved at 29 February 2000 meeting of the Reactor Safeguards Committee

The original procedure required placing the material removed from the RSR into an aluminum or stainless steel container, and sequence required purging equipment prior to removal from the RSR after cleaning. Change was to require Reactor Manager approval of the container and purge the assembly following removal. First item allowed flexibility in selecting waste container; second item ensured purging did not re-introduce contaminants into the RSR.

2. Procedure 26, Fuel-Handling Procedure (29 Feb 2000) -- New procedure approved at 29 February 2000 meeting of the Reactor Safeguards Committee

This procedure was generated using historical precedence and technical information from the General Atomics TRIGA Mark II Mechanical Maintenance and Operating Manual in response to an informal recommendation from a previous USNRC inspection. The procedure codified practice.

3. Procedure 27, Removal of Fuel from the Reactor Tank -- New procedure approved at 05 Jul 2000 meeting of the Reactor Safeguards Committee

This procedure provided specific handling and storage direction for removal of fuel from the reactor tank using historical precedence and technical information from the General Atomics TRIGA Mark II Mechanical Maintenance and Operating Manual. The procedure codified practice.

The Reactor Safeguards Committee reviewed potential for fuel element failure during handling, and potential for failure of the crane or the fuel handling tools.

C. Changes in Test and Experiments

In Progress:

Changes were submitted to RSC in October 2000, are currently in review, and will be reported following approval:

Experiment 15A, Ex-Core Irradiation of Large Samples -- Revised to allow irradiation in the bulk shield tank

Experiment 16, Profile of Gamma, Fast Neutron, and Slow Neutron Radiation in Beams From Open Port -- Major revision.

Approved During the Reporting Period:

1. Experiment 45, Neutron Radiography Using the Tangential Beamport -- New experimental procedure approved at 29 February 2000 meeting of the Reactor Safeguards Committee

The experiment is similar to other beam-port experiments, with a larger useful beam. Although impact on the reactor is clearly bounded by previous experiments, personnel access controls are therefore more restrictive.

2. Experiment 11B, Flux Traverse Using Fission Chamber (Radial) -- Addendum to Experiment 11 and 11A (Flux Traverse) allowing motion in radial rather than vertical direction

The experiment is similar to other flux traverse experiments, and uses the same apparatus. The only difference is direction of motion. This difference does not present any hazard different than the other flux traverse experiments.

3. Experiment 15A, Ex-Core Irradiation of Large Samples -- Revision allowing for irradiations with either neutrons or gamma field from the core, allowing use of the in-core dry-tube apparatus for ex-core irradiations, approved by RSC

This revision is bounded by previous in-core irradiations.

Sincerely,

Paul M. Whaley
KSU Nuclear Reactor Facility

Cc T. S. Michaels, USNRC Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission Region IV
KSU Nuclear Reactor Safeguards Committee